

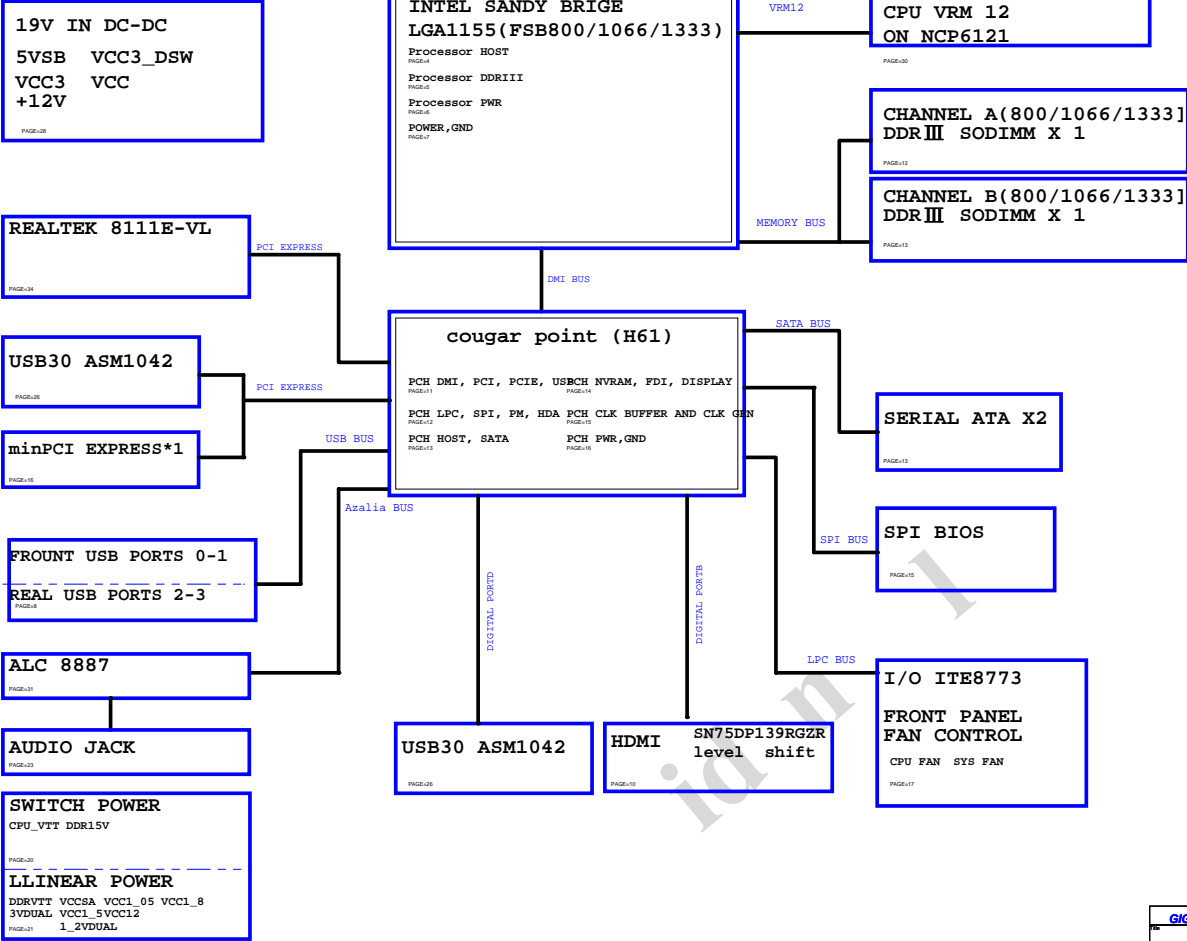
Model Name: GA-H77TN-SI

SHEET	TITLE
01	COVER SHEET
02	BLOCK DIAGRAM
03	POWER SEQUENCE
04	Processor HOST
05	Processor DDRIII
06	Processor PWR
07	Processor GND
08	DDRIII CHANNEL A & B
09	MINI PCIE ,eDP
10	HDMI, VGA CON
11	PCH DMI, PCI, PCIE, USB
12	PCH HOST,LPC, SPI, PM, HDA
13	PCH HOST, SATA
14	PCH NVRAM, FDI, DISPLAY
15	PCH CLK BUFFER AND CLK GEN
16	PCH PWR,GND
17	SIO IT8773 &FRONT PANEL
18	FRONT & REAL USB
19	VCC_CORE & AXG
20	SWITCH POWER
21	LINNER POWER
22	FAN CONTROL
23	HDA CODEC ALC887
24	AUDIO JACK
25	RTL8111E-VL/RTL8105E-H
26	USB30 ASM1042
27	REALTEK RTD2136

Revision 1.1

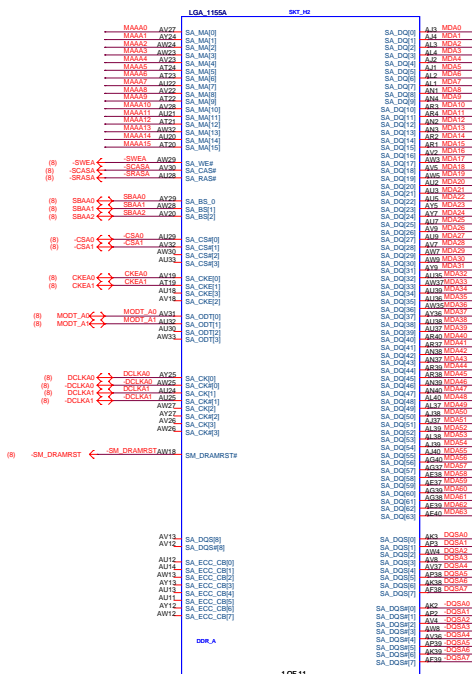
SHEET	TITLE
28	19V-IN DC to DC
29	BOM & PCB MODIFY HISTORY
30	
31	
32	
33	

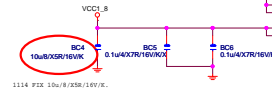
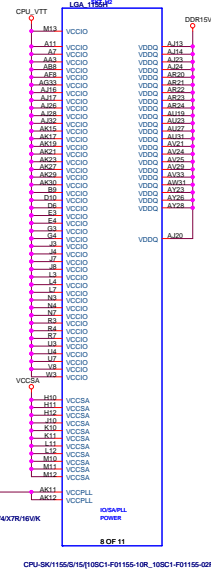
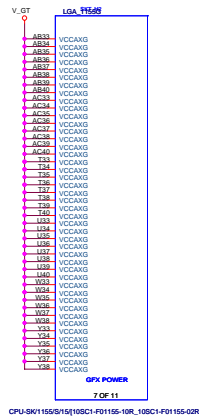
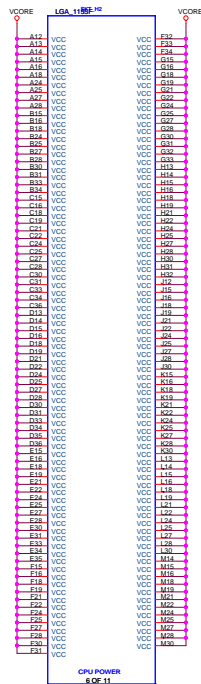
BLOCK DIAGRAM



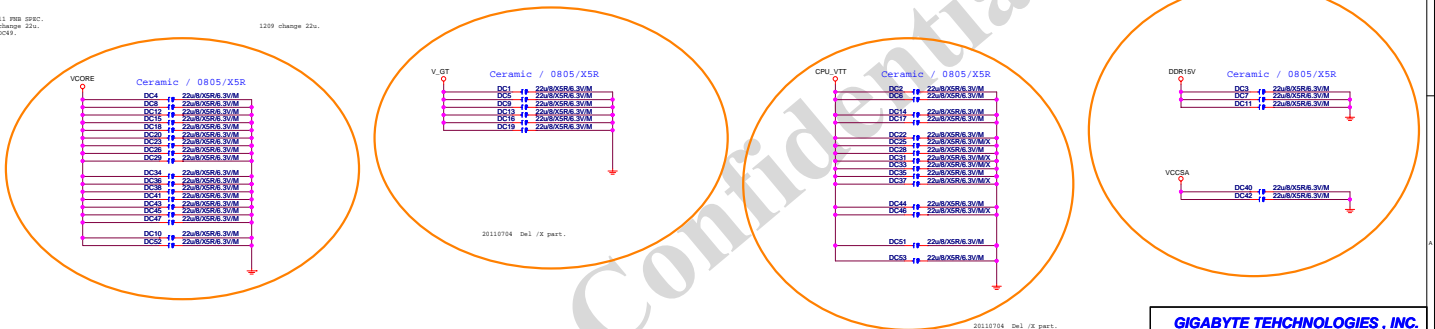








0825 If need meet 2011 FNR SPEC.  
Vcore.V\_GT.VTT must change 22u.  
Vcore side add DC48.DC49.

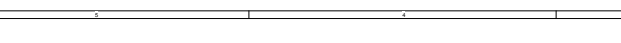
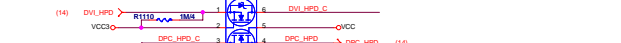
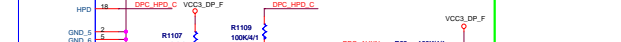
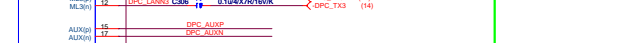
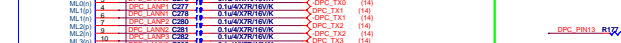
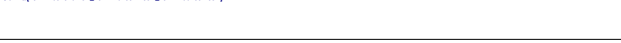
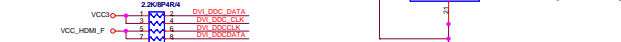
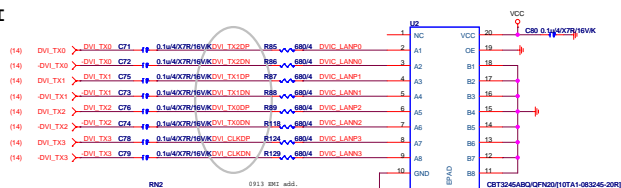




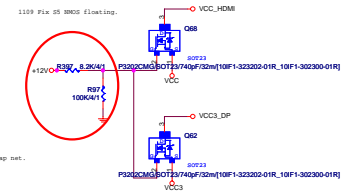
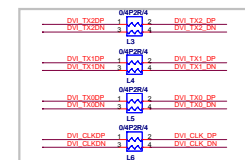
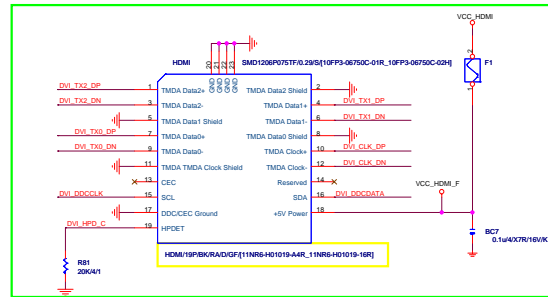




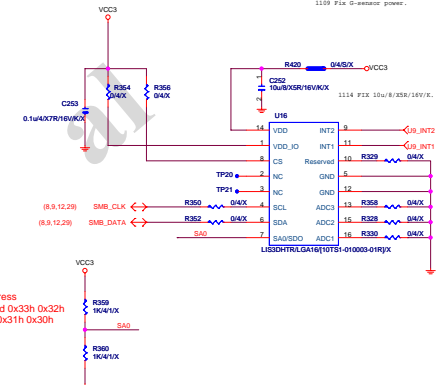
## HDMI



0111 Pin HDMI power to VCC + add divide circuit.

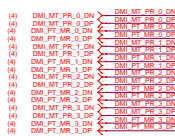
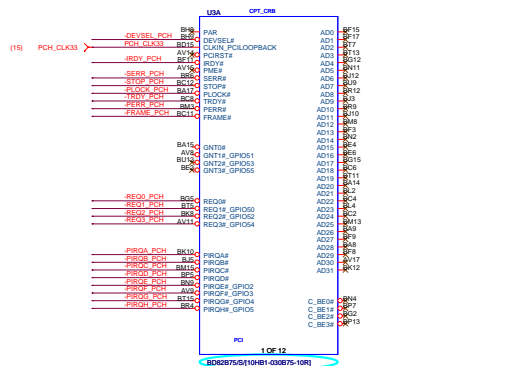
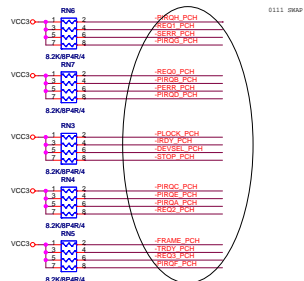


## G-sensor

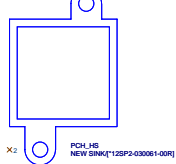


I2C Address  
R325 add 0x33h 0x32h  
R6 add 0x31h 0x30h

1227 Maho Bay PDG1.7 Unuse can't be share.



Boot	GNT1	GNT0
LPC	0	0
PCI	0	1
SPI	1	1



FOR USB3.0 EHCI USE

0402 W61 W75 USB ports 6 and 7 are disabled

0402 361 disabled

Add for touch Panel use

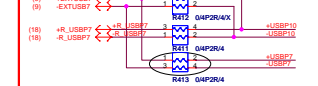


H61

Sup  
Nor

NOH MSAIA USBI R411 (

(9) EXT118B7 

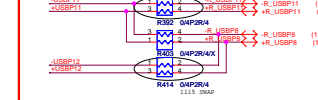


H77.B75

Use R392.R414

H63

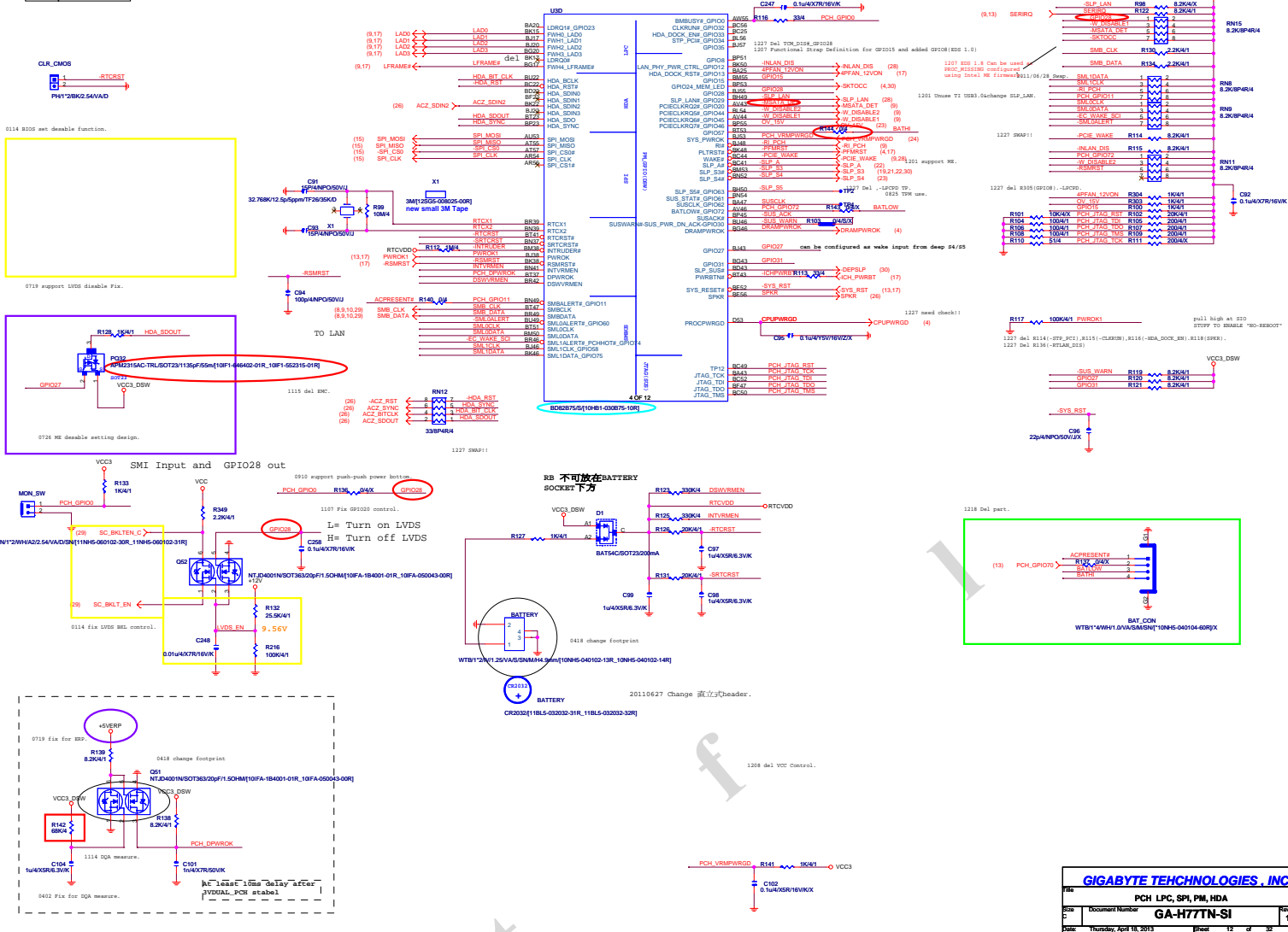
Support Card reader: R403 (FUSB2\_4)  
Non Support Card reader: R392 (FUSB2\_4)



20110706 FIX USB\_OC

PIN	CLR_CMOSHW
1-2	DEFAULT
2-3	CLR_CMOS

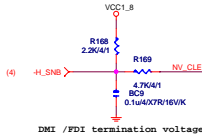
1220 No external pull-up/down resistors required. Signals driven by PCH.



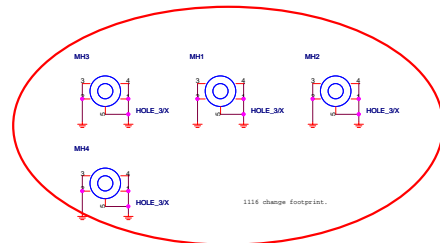
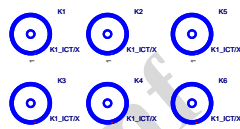
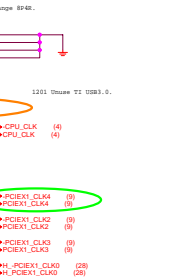
GIGABYTE TECHNOLOGIES, INC.			
PCH LPC, SPI, PM, HDA			
Rev	Document Number	GA-H77TN-SI	Rev
1.1			
Date	Thursday, April 18, 2013	Sheet	12 of 32

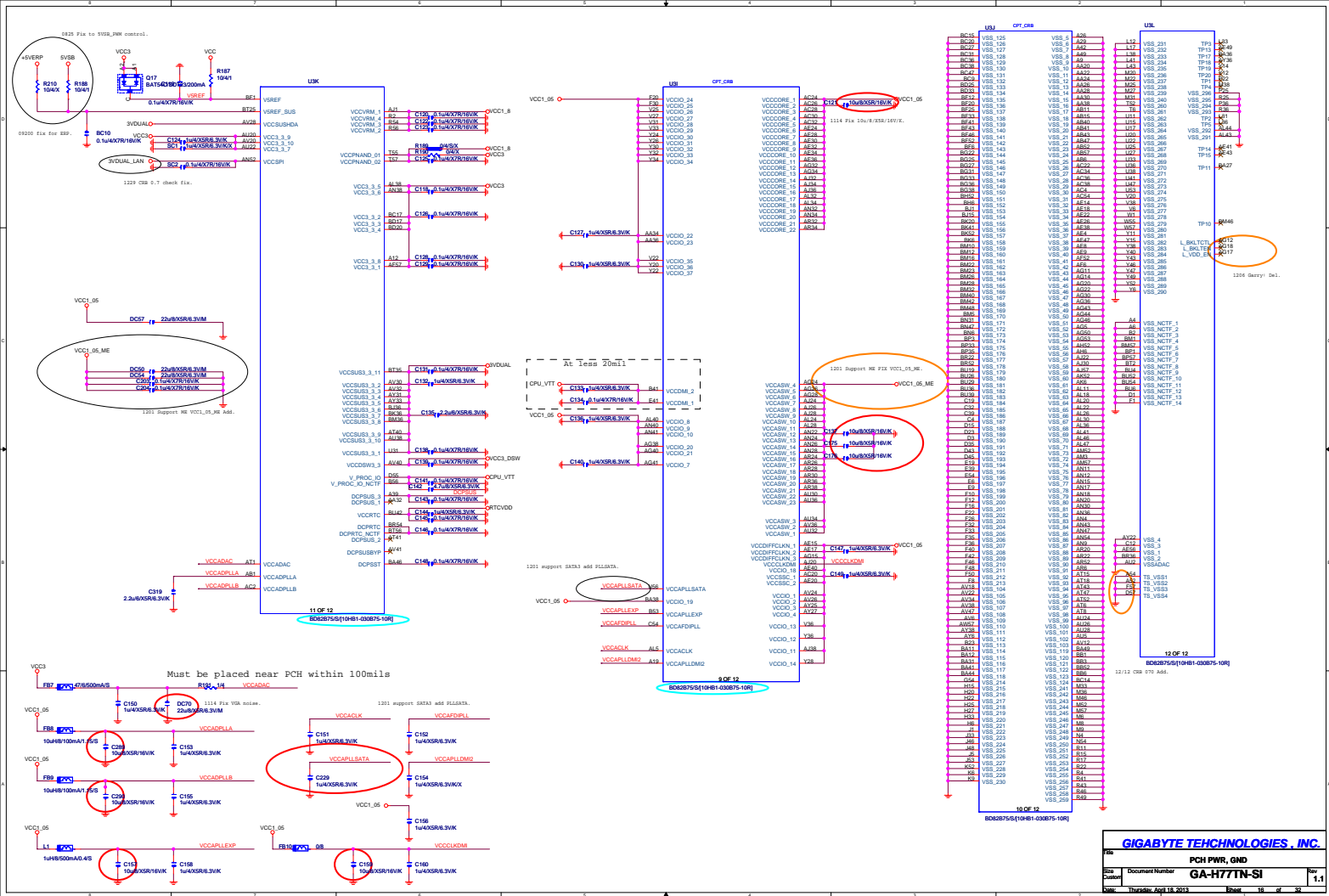


ONLY PORT DSUPPORT eDP



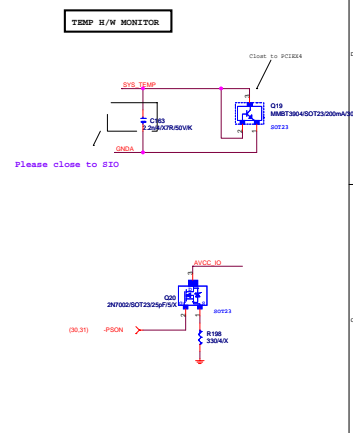
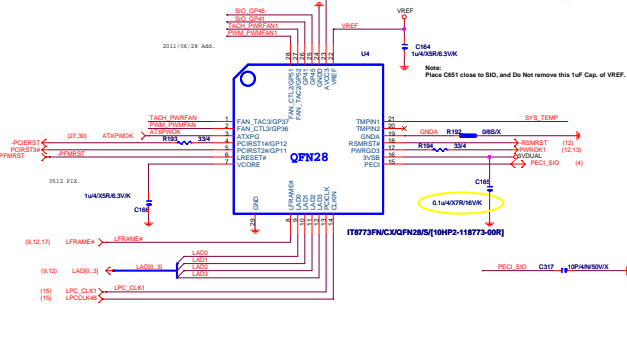
8082B75/S(10H-B1-030B75-10R)





Symbol	value	Description
JP4	1	K8 power sequence function is disabled
Pin126	0	K8 power sequence function is enabled
JP3 & JP5 Pin124 & 46	11	The default value of EC Index 15h76h17h is 80h
	T0	The default value of EC Index 15h76h17h is FFh(Fan off )
	01	The default value of EC Index 15h76h17h is 00h(Fan full speed)
	00	The default value of EC Index 15h76h17h is 40h
JP2	0	Disable WDT to rest PWROK
Pin122	1	Enable WDT to rest PWROK

Note:use EUP function:Pin29/Pin30/Pin31/Pin34/Pin42 pull\_high to SYS\_3VSB.  
Pin 5,Pin 32, pull\_high to 3.3VSB.Pin33 pull\_high to VCC.



AIO SPEC.

S0/S1: Green

S3: Orange.

S4/S5: Stay off.

3V0V

GND

R206 2.2K

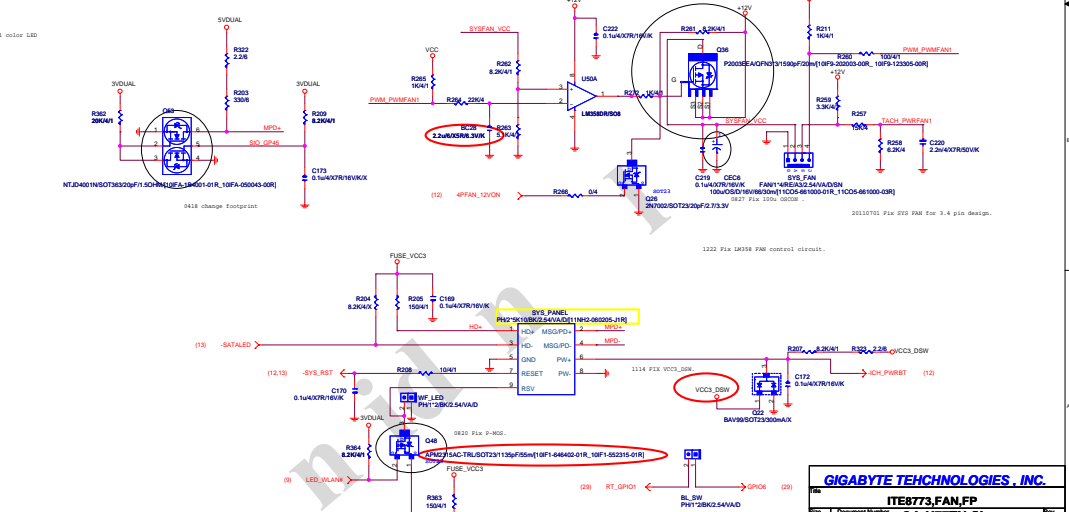
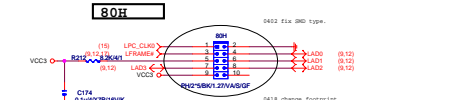
R204 2.2K

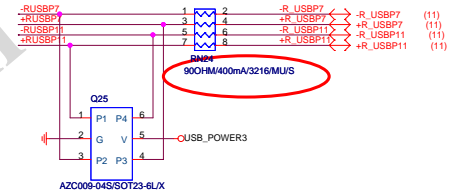
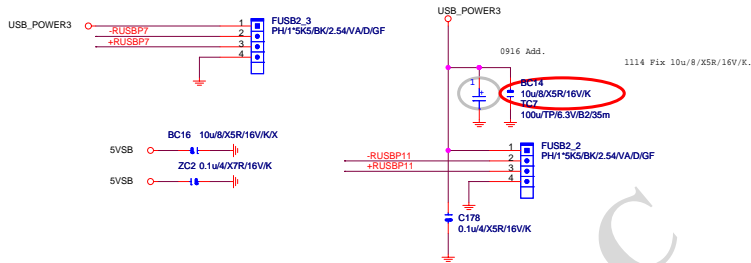
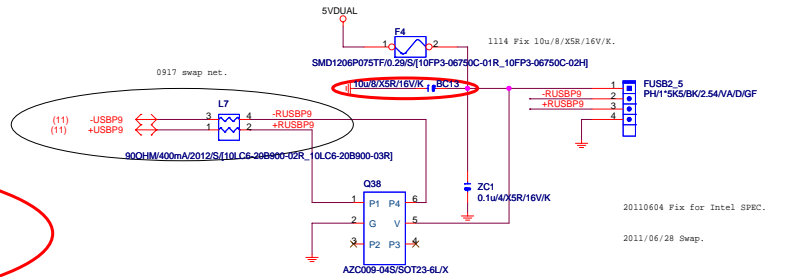
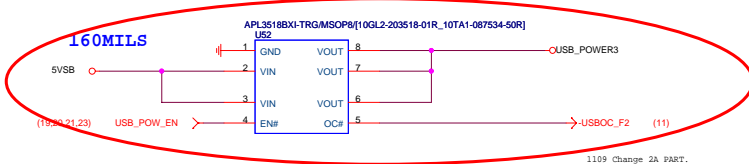
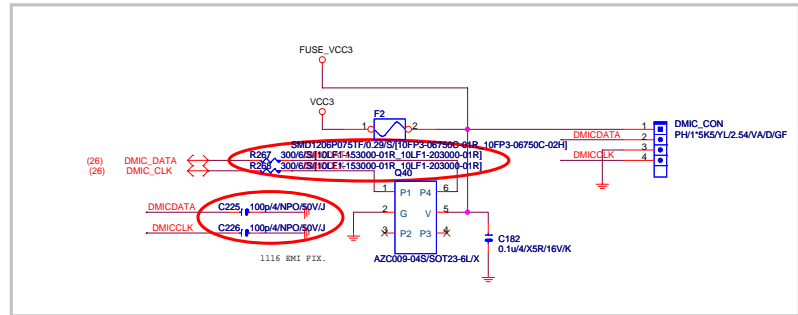
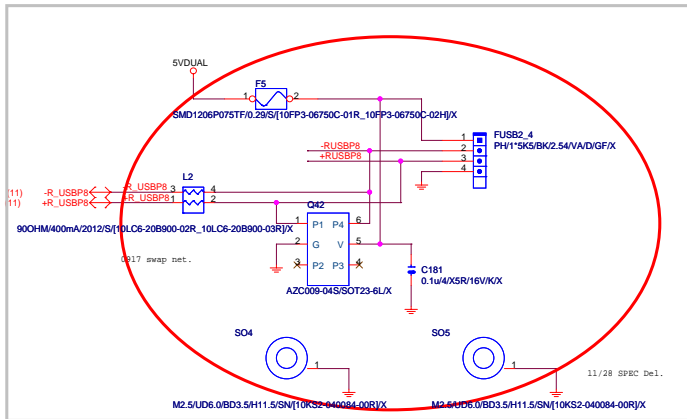
G1

O1

S0, GP1

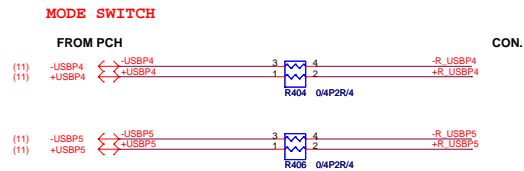
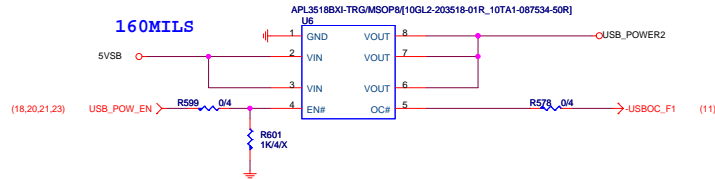
FOR DUAL COLOR LED





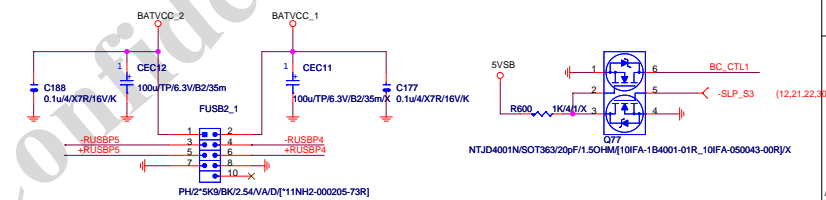
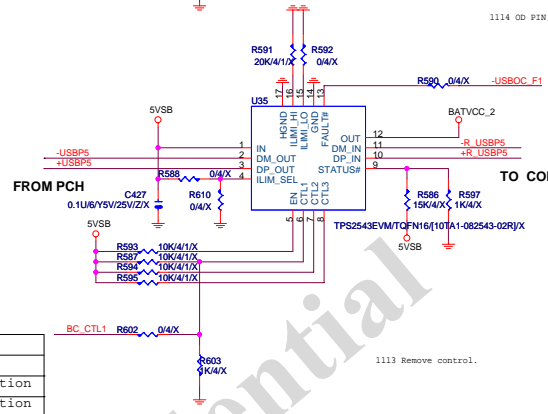
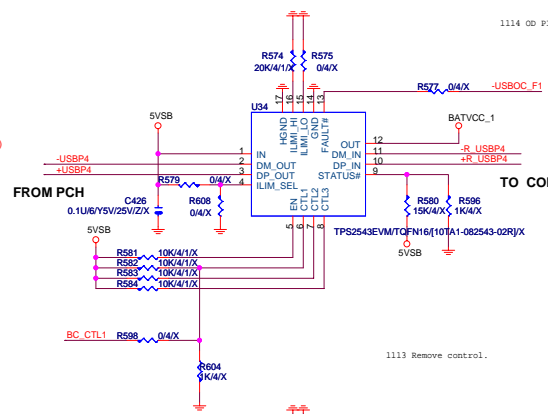
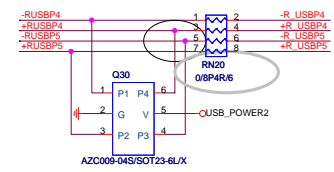
**GIGABYTE TECHNOLOGIES, INC.**

Title			
FRONT & REAL USB			
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USB MODE	R404, R406, R401, R402
CHARGER MODE	U34, U35

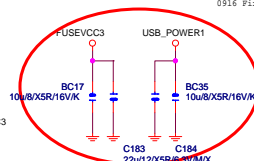
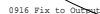
	CTL1	CTL2	CTL3	ILIM_SEL	MODE
S0	1	1	1	1	CDP, load detection
S3	0	1	1	1	Auto mode, no load detection
S4, S5(non ERP)	0	1	1	1	Auto mode, no load detection



**GIGABYTE TECHNOLOGIES, INC.**

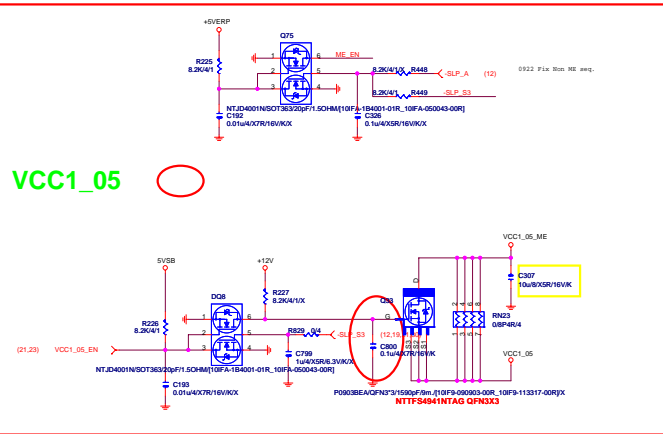
Title				F_USB CHARGER	
Size				Document Number	
Custom				GA-H77TN-SI	
Date				Rev	
Thursday, April 18, 2013				1.1	

Date: Thursday, April 18, 2013 Sheet 10 of 32

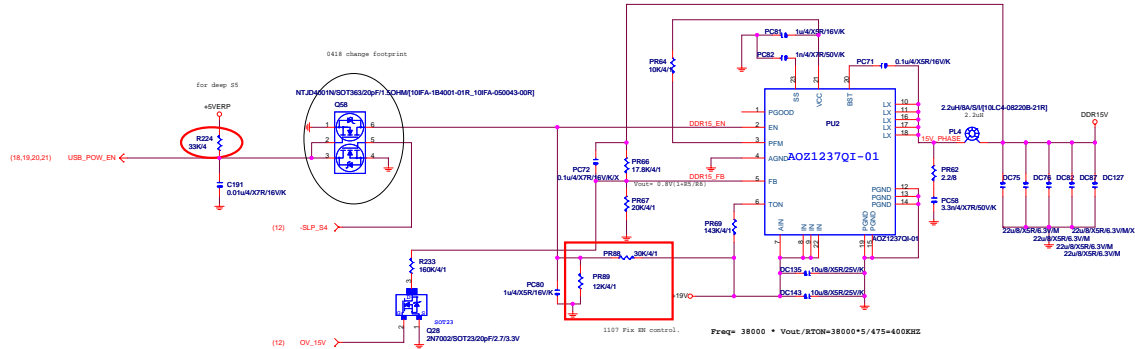




**VCC1\_05**



## DDR15V



	VTT_SEL
HI	1.05V
LO	1.0V

1208 check OK.

0709 Fix ATX power.

Freq= 38000 \* Vout/RTON=38000\*5/475=400KHZ

**GIGABYTE**

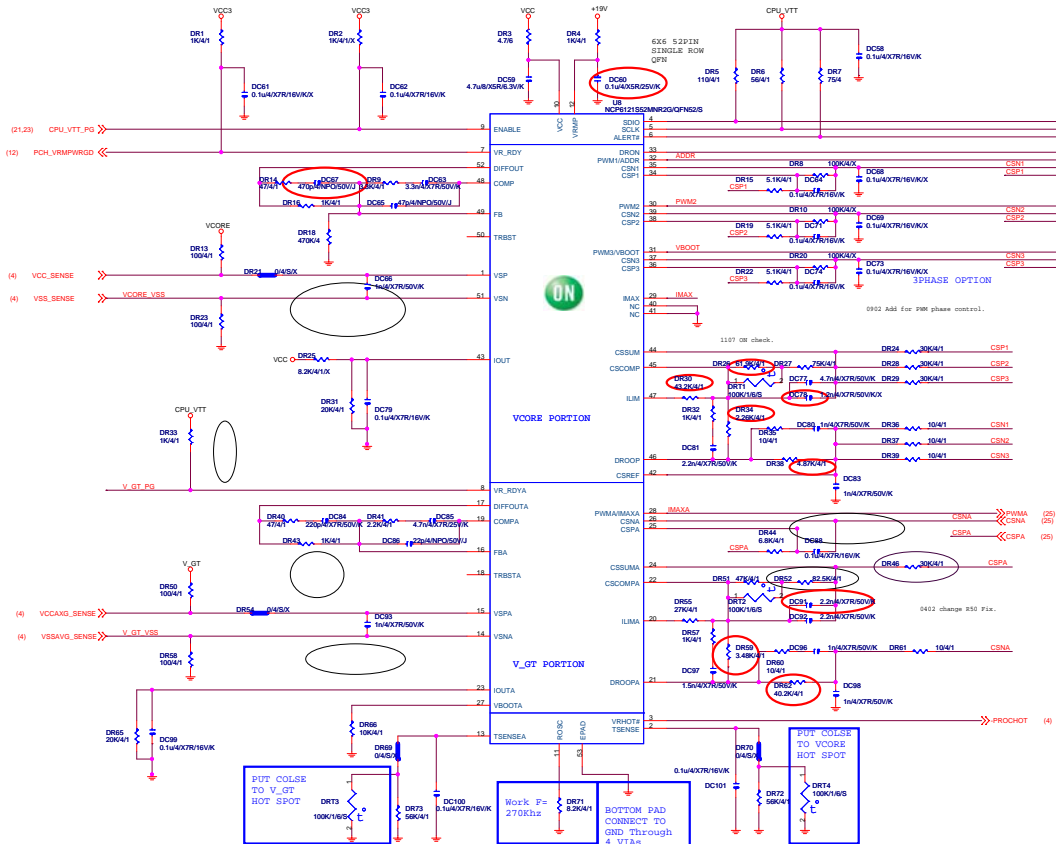
Title	SWITCH POWER
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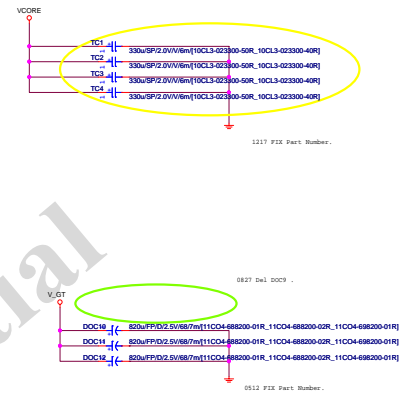
Size	Document Number <b>GA-H77TN-SI</b>
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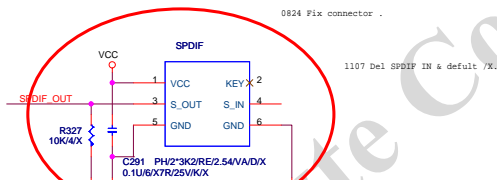
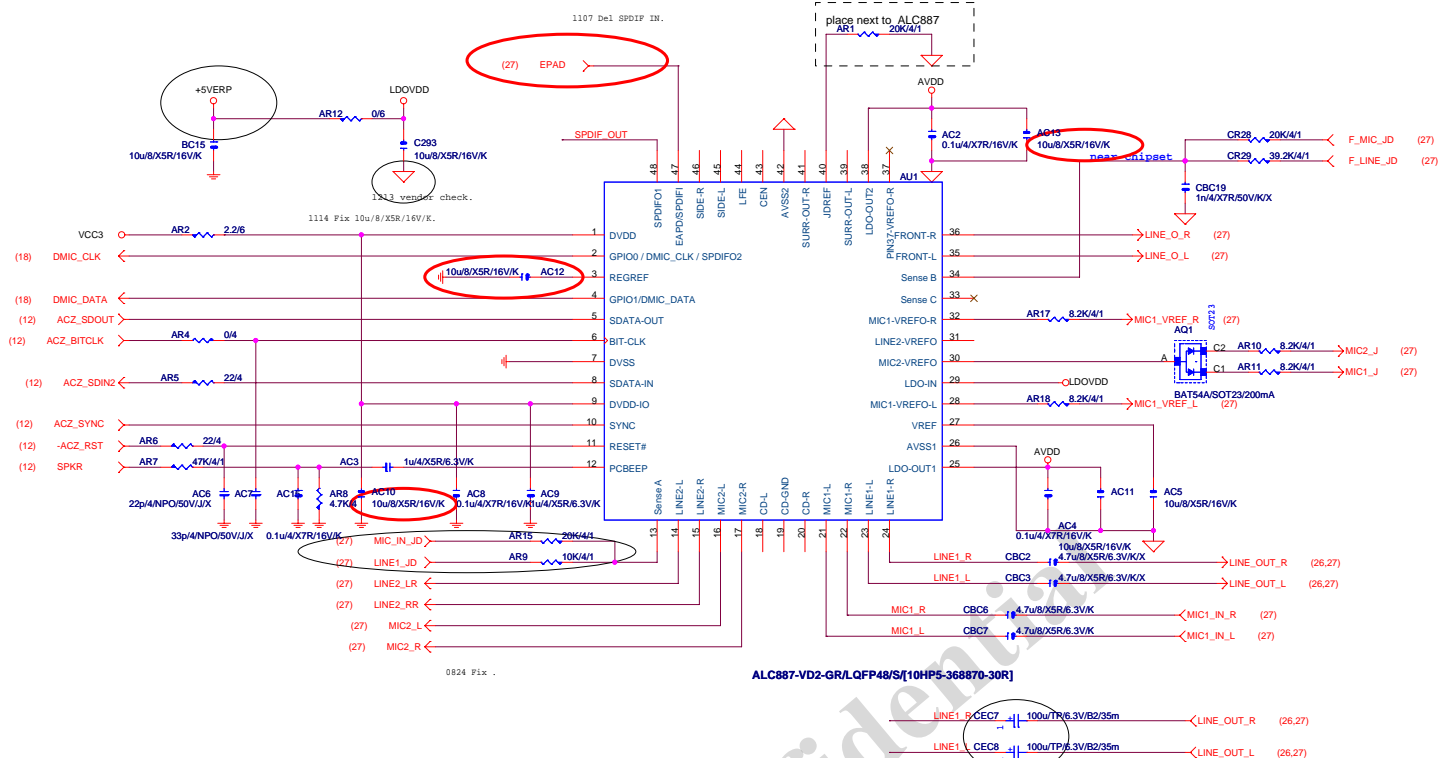
Date: Thursday, April 18, 2013 Sheet 23 of 32

11

# Intel SugarBay VR12 POWER CKT - 4+1 PHASE







<b>GIGABYTE TECHNOLOGIES, INC.</b>			
Title			
ALC887-VD			
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## 0114 Add BKL control



**GIGABYTE TECHNOLOGIES, INC.**

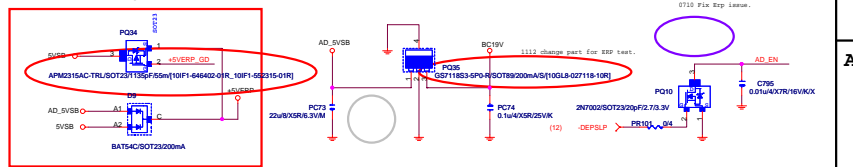
REALTEK RTD2136S

GA-H77TN-SI

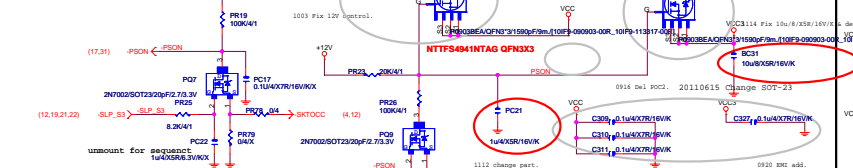
Date: Thursday, April 18, 2013

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**MUST STUFF R IF NOT STUFF PROTECT CIRCUIT**



VCC&VCC3  
VCC 14A 70W



## 5VSB

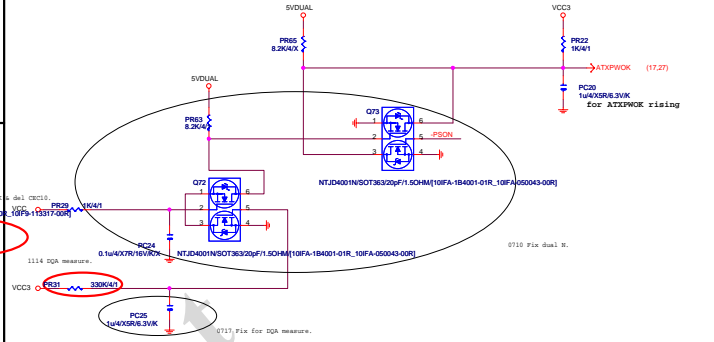
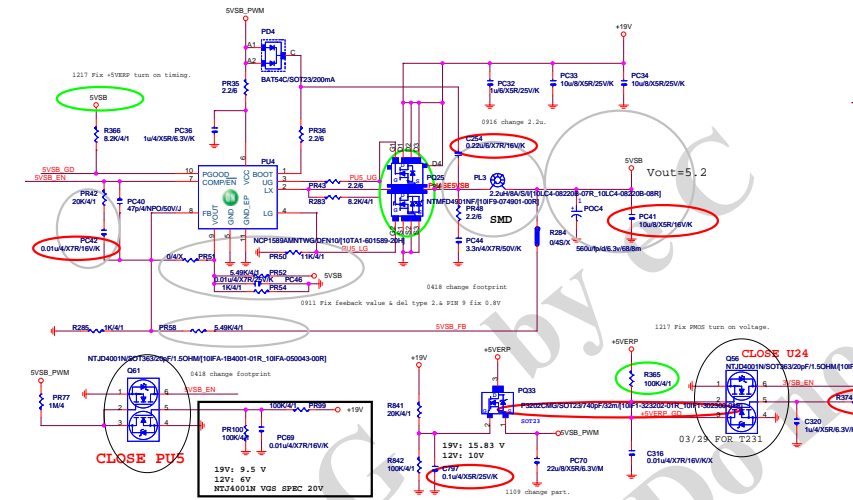
Voltage level : 5V  
Max current : 13A

\_\_\_\_\_

## VCC3\_DSW

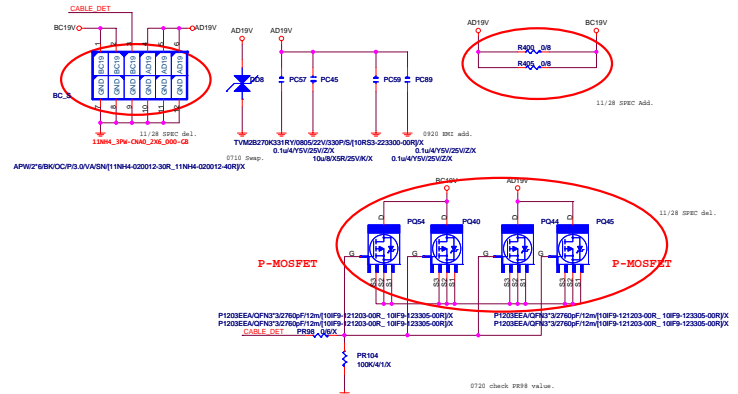
Voltage level : 3.3V  
Max current : 13A

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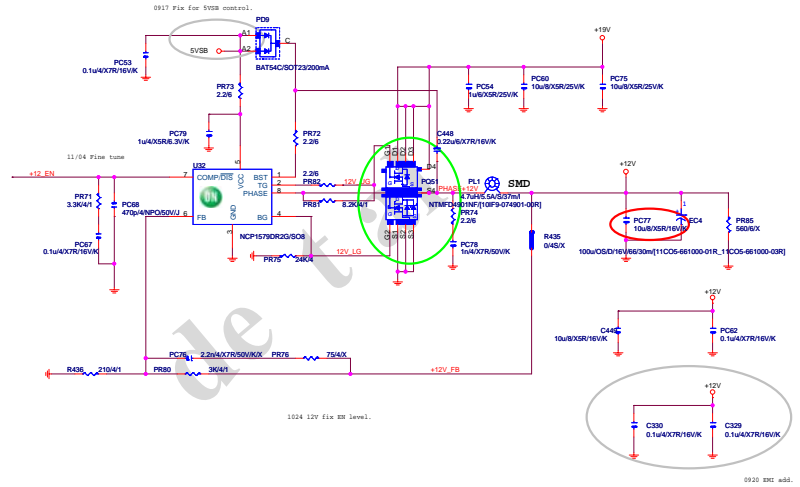


# PWRCON

0922 update OK battery pin define.



## +12V

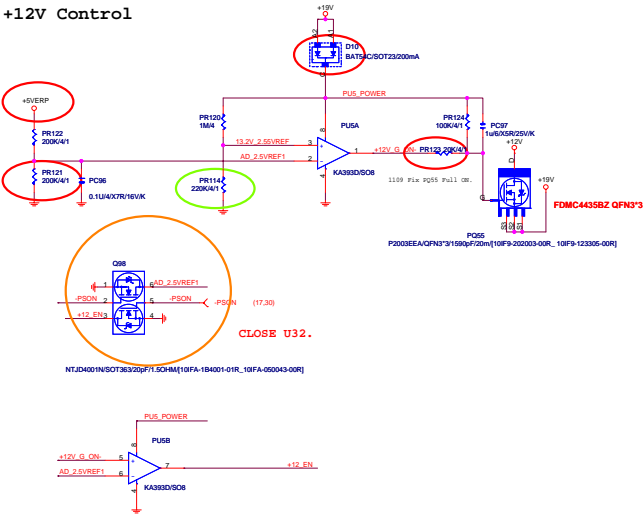


0920 SPTC add.

GIGABYTE TECHNIC

19V IN DC-DC			
File	Document Number	Rev	1.1
Size	GA-H77N-SI		
Created	Thursday, April 16, 2015	Sheet	31 of 32

## +12V Control



Version:1.1

[illegible][illegible]